

PROJECT DESCRIPTION

GENERAL

THIS PORTION OF THE PROJECT INVOLVES THE MODIFICATION OF THE EXISTING TRAFFIC CONTROL SIGNALS AT THE INTERSECTIONS OF MD 115 (MUNCASTER MILL ROAD) AND AIRPARK ROAD/SHADY GROVE ROAD AND MD 115 AND MUNCASTER ROAD/REDLAND ROAD IN MONTGOMERY COUNTY. MD 115 IS ASSUMED TO RUN IN AN EAST-WEST DIRECTION.

INTERSECTION OPERATION

1. MD 115 AND AIRPARK ROAD/SHADY GROVE ROAD

1. NORMAL OPERATION

THE INTERSECTION WILL OPERATE IN A NEMA SIX PHASE, FULL-TRAFFIC-ACTUATED MODE WITH THE MD 115 APPROACHES OPERATING SPLIT AND THE AIRPARK ROAD/SHADY GROVE ROAD APPROACHES OPERATING CONCURRENTLY.

EXCLUSIVE/PERMISSIVE LEFT-TURN PHASES ARE PROVIDED FOR THE AIRPARK ROAD/SHADY GROVE ROAD APPROACHES.

ALTERNATE PEDESTRIAN PHASE WILL BE PROVIDED ACROSS AIRPARK ROAD APPROACH. PEDESTRIAN INDICATIONS WILL BE PROVIDED ACROSS THE EAST AND WEST LEG OF MD 115.

2. EMERGENCY PRE-EMPTION

THE INTERSECTION WILL OPERATE AS INDICATED ABOVE, UNLESS A PUSHBUTTON OR EMERGENCY VEHICLE PRE-EMPTS THE TRAFFIC SIGNAL AND STOPS ALL APPROACHES EXCEPT THE MD 115 WESTBOUND APPROACH.

2. MD 115 AND MUNCASTER ROAD/REDLAND ROAD

THE INTERSECTION WILL OPERATE IN A NEMA EIGHT-PHASE, FULL-TRAFFIC-ACTUATED MODE WITH THE REDLAND ROAD/ MUNCASTER ROAD APPROACHES OPERATING CONCURRENTLY AND THE MD 115 APPROACHES OPERATING CONCURRENTLY.

EXCLUSIVE/PERMISSIVE LEFT-TURN PHASES EXIST FOR ALL APPROACHES.

ALTERNATE PEDESTRIAN PHASE WILL BE PROVIDED ACROSS THE EAST LEG OF MD 115. PEDESTRIAN INDICATIONS WILL BE PROVIDED ACROSS REDLAND ROAD/MUNCASTER ROAD APPROACHES.

CONTROLLER REQUIREMENTS

1. MD 115 AND AIRPARK ROAD/SHADY GROVE ROAD

INSTALL A FULL-TRAFFIC-ACTUATED, EIGHT-PHASE CONTROLLER WITH L.A.U., L.A.U. PANEL AND SEVEN (7) TIME-DELAY-OUTPUT LOOP DETECTOR AMPLIFIERS AND ASSOCIATED HARNESSSES HOUSED IN A NEMA "6" BASE MOUNTED CABINET.

2. MD 115 AND MUNCASTER ROAD/REDLAND ROAD

INSTALL ONE (1) FOUR-CHANNEL, TIME-DELAY-OUTPUT LOOP DETECTOR AMPLIFIER IN THE EXISTING BASE MOUNTED CABINET AND CONTROLLER.

MAINTENANCE OF TRAFFIC

THE FOLLOWING TRAFFIC CONTROL STANDARDS SHALL BE REFERENCED FOR THE PROJECT.

STANDARD NO. MD-104.00 - 104.00-30

STANDARD NO. MD-104.37-01 (LEFT-LANE CLOSURE)

STANDARD NO. MD-104.38-01 (RIGHT-LANE CLOSURE)

STANDARD NO. MD-104.40-01 (INTERSECTION FAR-LEFT LANE CLOSURE)

STANDARD NO. MD-104.41-01 (INTERSECTION FAR-RIGHT LANE CLOSURE)

STANDARD NO. MD-104.43-01 (SHOULDER WORK)

STANDARD NO. MD-104.31-01 (FLAGGING OPERATION)

STANDARD NO. MD-104.32-02 (INTERSECTION FLAGGING OPERATION)

PROJECT CONTACTS

THE CONTACT PERSONS FOR SHA ARE AS FOLLOWS:

MR. CHARLES WATKINS
DISTRICT ENGINEER
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DISTRICT UTILITIES ENGINEER
PHONE: (301) 513-7350

MR. MAJIB SHAKIB
ASSISTANT DISTRICT ENGINEER - TRAFFIC
PHONE: (301) 513-7358

MR. RICHARD L. DAFF, SR.
CHIEF, TRAFFIC OPERATIONS DIVISION
PHONE: (410) 787-7630

MR. RANDY BROWN
ASSISTANT DISTRICT ENGINEER - MAINTENANCE
PHONE: (301) 513-7304

EQUIPMENT LIST "A"

A. EQUIPMENT TO BE SUPPLIED BY SHA

CATEGORY CODE NO.	QUANTITY	DESCRIPTION
900000	8 EACH	FOUR-CHANNEL, TIME-DELAY-OUTPUT LOOP DETECTOR AMPLIFIER
971017	1 EACH	EIGHT-PHASE, FULL-TRAFFIC-ACTUATED CONTROLLER WITH L.A.U., L.A.U. PANEL AND ASSOCIATED HARNESSSES HOUSED IN A NEMA SIZE "6" BASE MOUNTED CABINET
973023	328 S.F.	SHEET ALUMINUM SIGNS TO CONSIST OF :
		- 1 EACH R3-5(1) SIGN (30 IN. X 36 IN.) - MAST ARM MOUNT
		- 2 EACH R3-5R SIGN (30 IN. X 36 IN.) - SPAN MOUNT
		- 1 EACH R3-5R SIGN (30 IN. X 36 IN.) - MAST ARM MOUNT
		- 3 EACH R3-5L SIGN (30 IN. X 36 IN.) - SPAN MOUNT
		- 2 EACH R3-5L SIGN (30 IN. X 36 IN.) - MAST ARM MOUNT
		- 1 EACH R3-6R SIGN (30 IN. X 36 IN.) - MAST ARM MOUNT
		- 1 EACH R10-7 SIGN (24 IN. X 30 IN.) - SPAN MOUNT
		- 2 EACH R10-12 SIGN (36 IN. X 42 IN.) - SPAN MOUNT
		- 2 EACH R10-12 SIGN (36 IN. X 42 IN.) - MAST ARM MOUNT
		- 1 EACH D-3(1) SIGN "AIRPARK RD" (VARIABLE X 16 IN.) DUAL FACED - SPAN MOUNT
		- 1 EACH D-3(1) SIGN "SHADY GROVE RD" (VARIABLE X 16 IN.) DUAL FACED - SPAN MOUNT
		- 2 EACH D-3(1) SIGN "MUNCASTER MILL RD" (VARIABLE X 16 IN.) DUAL FACED - SPAN MOUNT
		- 1 EACH D-3(1) SIGN MODIFIED "REDLAND RD" (VARIABLE X 16 IN.) DUAL FACED - MAST ARM MOUNT
		- 1 EACH ASSOCIATED SHIELD ASSEMBLY SIGN "EAST, MD 115, RIGHT ARROW" (30 IN. X 51 IN.) - POLE MOUNT
		- 2 EACH ASSOCIATED SHIELD ASSEMBLY SIGN "WEST, MD 115, RIGHT ARROW" (30 IN. X 51 IN.) - POLE MOUNT
		- 2 EACH ASSOCIATED SHIELD ASSEMBLY SIGN "WEST, MD 115, LEFT ARROW" (48 IN. X 75 IN.) - POLE MOUNT
		- 1 EACH ASSOCIATED SHIELD ASSEMBLY SIGN "EAST, MD 115, RIGHT ARROW" (48 IN. X 75 IN.) - POLE MOUNT
		- 1 EACH ASSOCIATED SHIELD ASSEMBLY SIGN "EAST, MD 115, LEFT ARROW" (30 IN. X 51 IN.) - GROUND MOUNT
		- 1 EACH ASSOCIATED SHIELD ASSEMBLY SIGN "EAST, MD 115, LEFT ARROW" (48 IN. X 75 IN.) - GROUND MOUNT

EQUIPMENT LIST "B" CONT.

B. EQUIPMENT TO BE FURNISHED AND/OR INSTALLED BY THE CONTRACTOR

CATEGORY CODE NO.	QUANTITY	DESCRIPTION
800000	2 EACH	FURNISH AND INSTALL CONDUIT BEND IN EXISTING BASE SIGNAL STRUCTURE
800000	750 L.F.	PULL BACK AND RE-FEED EXISTING ELECTRICAL CABLE
800000	1 EACH	FURNISH AND INSTALL FIBEROPTIC BLANKOUT ND RIGHT TURN SIGN
800000	1 EACH	CUT, CLEAN, GALVANIZE AND CAP TRAFFIC
800000	4 EACH	FURNISH AND INSTALL PEDESTRIAN PUSHBUTTON AND R10-4(1) SIGN (NOTE: SIGN TO READ "PUSH BUTTON TO CROSS AIRPARK ROAD")
800000	LUMP SUM	REMOVAL OF EXISTING SIGNAL EQUIPMENT TO BE SALVAGED
800000	LUMP SUM	DELIVERY OF SALVAGED SIGNAL EQUIPMENT AND MATERIAL
800000	3 EACH	ADJUST EXISTING HANHOLE TO FINAL GRADE
800000	2 EACH	FURNISH AND INSTALL 12 IN. OPTICALLY PROGRAMMED TRAFFIC SIGNAL HEAD SECTION
800000	99 EACH	FURNISH AND INSTALL 12 IN. VEHICULAR TRAFFIC SIGNAL HEAD SECTION:
	2 EACH	FURNISH AND INSTALL 12 IN., ONE-WAY, THREE-SECTION (R,Y WITH STROBE,G OPTICALLY PROGRAMMED) TRAFFIC SIGNAL HEAD - SPAN MOUNT
	6 EACH	FURNISH AND INSTALL 12 IN., ONE-WAY, THREE-SECTION (R,Y,G) TRAFFIC SIGNAL HEAD - SPAN MOUNT
	4 EACH	FURNISH AND INSTALL 12 IN., ONE-WAY, FOUR-SECTION (R,Y,G,GA) TRAFFIC SIGNAL HEAD - SPAN MOUNT
	6 EACH	FURNISH AND INSTALL 12 IN., ONE-WAY, FIVE-SECTION (R,Y,YA,G,GA) TRAFFIC SIGNAL HEAD - SPAN MOUNT
	2 EACH	FURNISH AND INSTALL 12 IN., ONE-WAY, THREE-SECTION (R,Y,G) TRAFFIC SIGNAL HEAD - MAST ARM MOUNT
	5 EACH	FURNISH AND INSTALL 12 IN., ONE-WAY, FIVE-SECTION (R,Y,YA,G,GA) TRAFFIC SIGNAL HEAD - MAST ARM MOUNT
800000	16 EACH	FURNISH AND INSTALL 12 IN. PEDESTRIAN SIGNAL HEAD SECTION:
	1 EACH	FURNISH AND INSTALL 12 IN., TWO-WAY, PEDESTRIAN SIGNAL HEAD - PEDESTRIAN MOUNT
	2 EACH	FURNISH AND INSTALL 12 IN., TWO-WAY, PEDESTRIAN SIGNAL HEAD - POLE MOUNT
	2 EACH	FURNISH AND INSTALL 12 IN., ONE-WAY, PEDESTRIAN SIGNAL HEAD - POLE MOUNT

EQUIPMENT LIST "B"

B. EQUIPMENT TO BE FURNISHED AND/OR INSTALLED BY THE CONTRACTOR

CATEGORY CODE NO.	QUANTITY	DESCRIPTION
120500	LUMP SUM	MAINTENANCE OF TRAFFIC
120610	14 U.D.	ARROW PANEL
120620	300 S.F.	TEMPORARY TRAFFIC SIGNS
130850	LUMP SUM	MOBILIZATION
203030	8 C.Y.	TEST PIT EXCAVATION
500000	1050 L.F.	12 IN. WHITE THERMOPLASTIC PAVEMENT MARKINGS
500000	475 L.F.	24 IN. WHITE THERMOPLASTIC PAVEMENT MARKINGS
801004	31 C.Y.	FURNISH AND INSTALL CONCRETE FOR SIGNAL FOUNDATION
801106	40 L.F.	FURNISH AND INSTALL 4 IN. X 6 IN. WOOD SIGN SUPPORTS
802501	630 L.F.	FURNISH AND INSTALL NO. 6 A.W.G. STRANDED BARE COPPER GROUND WIRE
805011	150 L.F.	FURNISH AND INSTALL 1 IN. ELECTRICAL CABLE - GALVANIZED SLEEVE
805155	480 L.F.	FURNISH AND INSTALL 4 IN. SCHEDULE 80 RIGID PVC CONDUIT - SLOTTED
805160	180 L.F.	FURNISH AND INSTALL 1 IN. LIQUID-TIGHT, FLEXIBLE NON-METALLIC CONDUIT FOR DETECTOR SLEEVE
810010	45 L.F.	FURNISH AND INSTALL ELECTRICAL CABLE 1-CONDUCTOR NO. 4 A.W.G. - THHN/THWN
811001	11 EACH	FURNISH AND INSTALL ELECTRICAL HANDHOLE
813014	36 S.F.	INSTALL GROUND MOUNTED SIGN
813015	292 S.F.	INSTALL OVERHEAD SIGN
831010	3 EACH	FURNISH AND INSTALL 250 WATT HPS LUMINAIRE WITH PHOTOCELL
837001	8 EACH	FURNISH AND INSTALL GROUND ROD- 3/4 IN. DIAMETER X 10 FT. LENGTH
838003	1 EACH	FURNISH AND INSTALL CONTROL AND DISTRIBUTION EQUIPMENT
861103	8500 L.F.	FURNISH AND INSTALL ELECTRICAL CABLE - 2 CONDUCTOR (ALUMINUM SHIELDED)
861105	1600 L.F.	FURNISH AND INSTALL ELECTRICAL CABLE - 2 CONDUCTOR (NO. 14 A.W.G.)
861106	2800 L.F.	FURNISH AND INSTALL ELECTRICAL CABLE - 3 CONDUCTOR (NO. 14 A.W.G.)
861107	250 L.F.	FURNISH AND INSTALL ELECTRICAL CABLE - 5 CONDUCTOR (NO. 14 A.W.G.)
861108	3660 L.F.	FURNISH AND INSTALL ELECTRICAL CABLE - 7 CONDUCTOR (NO. 14 A.W.G.)
861116	450 L.F.	FURNISH AND INSTALL ELECTRICAL CABLE - 2 CONDUCTOR (NO. 12 A.W.G.)
862101	17500 L.F.	FURNISH AND INSTALL LOOP WIRE ENCASED IN FLEXIBLE TUBING (NO. 14 A.W.G.)
862102	5500 L.F.	FURNISH AND INSTALL SAWCUT FOR SIGNAL (LOOP DETECTOR)
866103	2 EACH	FURNISH AND INSTALL 15 FT. STREET LIGHTING ARM
866104	1 EACH	FURNISH AND INSTALL 20 FT. STREET LIGHT ARM
869101	610 L.F.	FURNISH AND INSTALL STEEL SPAN WIRE - 1/4 IN. DIAMETER
869102	800 L.F.	FURNISH AND INSTALL STEEL SPAN WIRE - 3/8 IN. DIAMETER
871202	1 EACH	INSTALL CONTROLLER AND CABINET - BASE MOUNT
800000	270 L.F.	FURNISH AND INSTALL 4 IN. SCHEDULE 80 RIGID PVC CONDUIT - TRENCHED
800000	80 L.F.	FURNISH AND INSTALL 3 IN. SCHEDULE 80 RIGID PVC CONDUIT - TRENCHED
800000	240 L.F.	FURNISH AND INSTALL 2 IN. SCHEDULE 80 RIGID PVC CONDUIT - TRENCHED
	LUMP SUM	REMOVAL AND DISPOSAL OF EXISTING MATERIAL AND EQUIPMENT
	2 EACH	FURNISH AND INSTALL BREAKAWAY PEDESTAL POLE
	4 EACH	FURNISH AND INSTALL 12 IN. X 32 FT. STEEL STRAIN POLE
	1 EACH	FURNISH AND INSTALL 27 FT. STEEL POLE WITH A 50 FT. MAST ARM
	1 EACH	FURNISH AND INSTALL 27 FT. STEEL POLE WITH A 60 FT. MAST ARM

TSP-5

 MARYLAND DOT - STATE HIGHWAY ADMINISTRATION <i>Office of Traffic & Safety</i>	TRAFFIC ENGINEERING DESIGN DIVISION	
	GENERAL INFORMATION SHEET	
MD 115 INTERSECTIONS		
DRAWN BY: <u>S.BLOSS</u>	F.A.P. NO. _____	TS NO. _____
CHECKED BY: <u>N.LEARY</u>	S.H.A. NO. _____	SHEET NO. _____
SCALE: <u>1" = 20'</u>	COUNTY: <u>MONTGOMERY</u>	T.I.M.S. NO. _____
DATE: <u>11</u>		